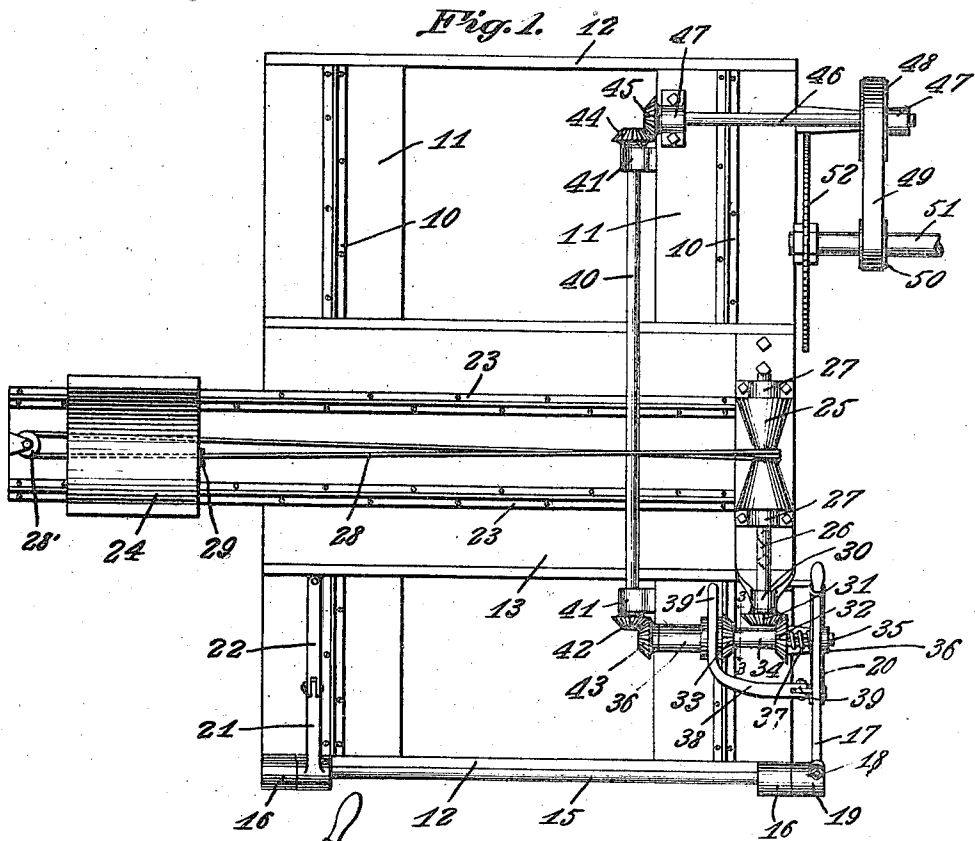
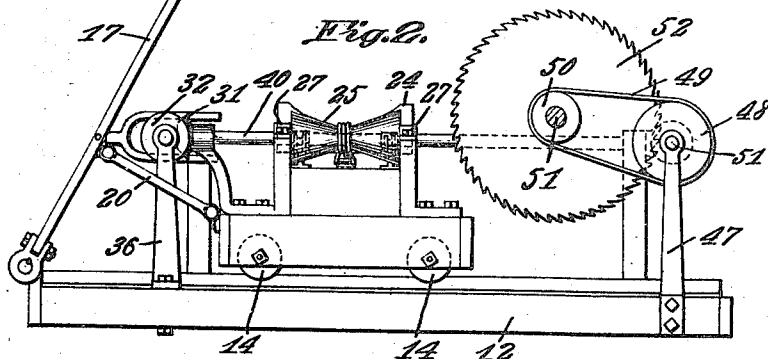
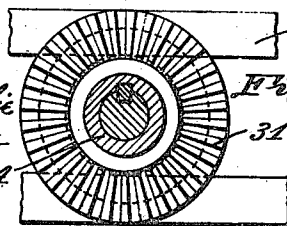


W. SABIN.
LOG SAWING DEVICE.
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1,255,935.

Patented Feb. 12, 1918.



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LOG-SAWING DEVICE.

1,255,935.

Specification of Letters Patent.

Patented Feb. 12, 1918.

Application filed April 14, 1917. Serial No. 162,126.

To all whom it may concern:

Be it known that I, WARREN SABIN, a citizen of the United States, residing at Tavera, in the county of Richland and State of Wisconsin, have invented certain new and useful Improvements in Log-Sawing Devices, of which the following is a specification.

This invention has relation to sawing machines, and has for an object to provide a log sawing machine whereby a log may be sawed up into blocks whereby the blocks may be subsequently split for kindling wood.

Another object of the invention is to provide a log sawing machine having the above named characteristics and embodying suitable supports one of which is designed to support the log whereby it may be moved longitudinally and transversely with means operable by a single lever for moving the log in the manner stated whereby it may be fed to the saw for division in the manner set forth.

In addition to the foregoing my invention comprehends improvements in the details of construction and arrangement of parts to be hereinafter more fully described and particularly set forth in the appended claims.

In the accompanying drawings in which similar and corresponding parts are designated by the same characters of reference throughout the several views in which they appear:—

Figure 1, is a view in plan illustrating a log sawing machine constructed after the manner of my invention.

Fig. 2, is a view of the machine in side elevation, and

Fig. 3, is a detail section taken on the line 3—3 of Fig. 1.

With reference to the drawings 10 indicates a pair of rails mounted upon stringers 11 which are parallel and spaced, and connected together at their ends through the medium of connecting bars 12 whereby the gage between the rails 10 may be maintained.

A truck indicated at 13 and which may be of any desired frame construction is mounted upon rollers 14 designed for rolling contact with the rails 10 whereby the truck may be moved from one end of the stringers to the other. To this end a shaft 15 is extended across one end of the stringers in contiguous relation to one of the con-

necting bars 12, the shaft being journaled at either end in bearings 16 mounted upon the stringers. A lever 17 is pivotally mounted as at 18 to a sleeve 19 which is keyed or otherwise secured to the shaft 15 whereby the lever may be oscillated in one direction to rotate the shaft and in a direction at right angles to said direction of oscillation upon its pivot 18 for a purpose which will be presently noted. A link 20 connects an intermediate portion of said lever with the truck, and an arm 21 is fixedly secured at one end to the shaft and at its opposite end through the medium of the link 22 to the truck at the end thereof remote from the end to which the link 20 is connected whereby by oscillating said lever 17 the truck may be moved along its rails in a positive and uniform manner.

The truck 13 is designed to support a log feeding means which includes a pair of rails 23 which are mounted upon the upper surface of the truck in spaced relation and extended in a direction at right angles to the rails 10 mentioned above. A carriage 24 is mounted upon the rails 23 for sliding movement thereon and is formed with an upper concaved portion in which to receive the rear end of the log. Mounted upon the truck 13 at the end thereof adjacent the lever 17 is a log feeding roller 25 which is smallest in diameter at a point intermediate the ends thereof conveying the impression of a pair of cones having their apices joined. A shaft 26 penetrates the roller and the shaft is journaled upon bearings 27, mounted upon the truck. An endless flexible element 28 is wrapped several times around the roller 25 at the intermediate portion thereof and one of the stretches of the flexible element is passed around a pulley 28' and connected to the carriage 24 as indicated at 29.

The shaft 26 is extended beyond one of the bearings, and preferably toward the lever 17 and is journaled in an additional bearing 30, the extremity of the shaft beyond the bearing being provided with a bevel gear 31 which is designed for intermittent engagement with opposed bevel gears 32 and 33 connected for sliding movement in unison through the medium of a sleeve 34 through which a shaft 35 extends. The shaft is mounted upon bearings 36 which find support upon one of the stringers, and a coil spring operating by expansion and indicated at 37 is embraced about the shaft

and interposed between the gear 32 and the bearings 36, whereby to normally retain said gear 32 in meshing engagement with the above mentioned gear 31. An arm 38 is pivotally connected as at 39 to the lever 17, extends laterally therefrom and has its terminal bent at right angles as indicated at 39' and bifurcated to straddle a collar formed on the gear 33 which collar is formed with a circumferential groove to receive the members of the bifurcation.

A shaft 40 is journaled at opposite ends upon bearings 41 which may be mounted upon any stationary support, the shaft preferably extending parallel to one of the rails 10 in contiguous relation thereto and having a bevel gear 42 secured to one end for normal meshing engagement with the bevel gear 43 provided upon the shaft 35. The opposite end of the shaft 40 is also provided with a bevel gear 41 which normally meshes with a corresponding gear 45 secured to the one end of a shaft 46 which extends at right angles to said shaft 41 and is mounted at either end in bearings 47. The shaft 46 also carries a belt pulley 48 around which a belt 49 passes, said belt also passing around a pulley 50 mounted upon the saw shaft 51. A conventional type of circular saw 52 is secured to the saw shaft 51 and is disposed adjacent the end of the truck 13, or in a position to permit the truck to be moved diametrically across the face of the saw.

In operation a log is supported at one end upon the carriage 24 and at its opposite end upon the roller 25 with the log projecting therebeyond so that the lever 17 may be oscillated to rotate the shaft 15 to shift the truck 13 whereby to move the end of the log into engagement with the saw thereby severing a section therefrom. The opposed bevel gears 32 and 33 are sufficiently spaced to permit disengagement of both with the intermediate gear 31 whereby the roller 25 may be stationary during the sawing operation. However, after a section of the log has been removed and the truck 13 is moved to its original position by oscillating the lever 17 in a counter direction, said lever 17 is shifted to bring the gear 32 into meshing engagement with the gear 31 whereupon the roller 25 is rotated. Said roller receives its power primarily from the saw shaft 51, the rotation thereof being transmitted through the agency of pulleys 50 and 48, and the belt 49 to the shaft 46. Rotation of the shaft 46 is transmitted through the medium of gears 44 and 45, shaft 40, and gears 42 and 43 to the shaft 35 which carries the aforesaid gear 32.

It will be obvious that rotation of the supporting roller 25 will feed the log forward, and owing to the flexible element 28 and its connection to the carriage 24, the rear end of the log will be likewise urged forward until the severed end of the log is positioned beyond the saw to the required distance to sever the next section.

When the log has been completely divided the lever 17 is shifted laterally to bring the gear 33 into engagement with the gear 31, such movement disconnecting the gears 31 and 32, whereupon the roller 25 will be rotated in a direction the reverse from that it takes when feeding, and as a consequence the carriage 24 will obviously be returned to its former position at the end of the truck 13 opposite that end which supports the roller.

Having thus described my invention what I claim as new and desire to secure by Letters Patent is:—

1. In a log sawing machine, a frame, a constantly rotating bar, a truck movably mounted on the frame, gearing operable means on the truck for feeding a log, stationarily mounted gearing on the frame in the path of movement of the truck gearing, and means for moving the truck in one direction to engage the log against the saw, and for moving the truck in a reverse direction to bring the gearing of the truck into engagement with the frame gearing whereby to operate the log feeding mechanism.

2. In a log sawing machine, a frame, a truck movably mounted thereon, a saw, a carriage movably mounted on the truck, a shaft journaled on the truck, a flexible connection between the shaft and the carriage whereby to move the carriage in opposite directions, and upon a like rotation of the shaft, a gear carried by said shaft, a pair of shiftable gears mounted on the frame for constant rotation, in the path of movement of the truck gear, and means for shifting the truck in one direction to engage the log against the saw and for shifting the truck in an opposite direction to bring the truck gear into engagement with one of the reversing gears whereby to move the carriage of the truck to feed the log, said truck moving means being operable to shift the reversing gears to cause movement of the carriage in either direction.

In testimony whereof I affix my signature in presence of two witnesses.

WARREN SABIN.

Witnesses:

JALMER JACOBSON,
CHRIS MONSON.